

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
Promoting Expanded Opportunities for Radio)	ET Docket No. 10-236
Experimental and Market Trials under Part 5)	
of the Commission's Rules and Streamlining)	
Other Related Rules)	
)	

To: The Commission

Reply Comments of EIBASS

Engineers for the Integrity of Broadcast Auxiliary Services Spectrum (EIBASS) hereby respectfully submits its reply comments in the above-captioned notice of proposed of rulemaking relating to new categories of experimental stations in the Part 5 Experimental Radio Service (ERS) rules.

I. Marcus' Proposal for a "de minimis" Interference Criteria Should Not Be Adopted

1. Marcus Spectrum Solutions LLC ("Marcus") proposes that experimental operations be allowed to cause "de minimis" interference to licensed incumbents. Marcus is wrong. The appropriate interference for experimental operation should continue to be no harmful interference, period. A de minimis interference criteria is sometimes reasonable and appropriate between stations or services where the technical parameters are well established, such as between full-service DTV stations and Class A TV, low power TV (LPTV), and TV translator stations. However, it is inappropriate when the newcomer operation lacks well-established parameters, and where studies of the required protection ratios have not yet been made.
2. EIBASS asks why existing licensees should be expected to suffer any interference from experimental operations? Marcus also does not define what level of de minimis interference should be allowed, nor how it would be calculated. Is Marcus proposing a 0.5% de minimis criteria (the benchmark for DTV-into-DTV interference), a 2% de minimis criteria (the benchmark for DTV-into-LPTV/TV translator interference), or some other, even more generous benchmark? Would the calculation be based on population, land area, or some other metric? What percentage of the time should the predicted interference be allowed? One percent? Ten

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percent? Continuously? What propagation model(s) should be used? A de minimis criterion opens a plethora of calculation issues; better to leave that Pandora's box firmly closed.

3. While EIBASS realizes that newcomer, not-at-risk experimental licensees would benefit from a de minimis interference protection criteria, existing licensees would be unnecessarily put at risk. Existing licensees would have an unreasonable burden of first tracking down an experimental station causing interference, and then documenting that it was non-de minimis interference. In a digital world, tracking down interference can be more challenging than for analog signals. Indeed, sometimes interference to a digital signal is not immediately obvious, because interference may degrade the protected signal's fade margin, but not cause outright signal outage. In that event, the problem may show up as more short-term outages than normal; it may take a spectrum analyzer to disclose the presence of an interfering signal. The benchmark should remain "no interference." It can be difficult enough to locate an interfering experimental operation, especially one that ignores a frequency coordination obligation (as was documented in the initial EIBASS comments).

4. EIBASS submits that it is easier for a newcomer experimental operator to shut down or otherwise remedy interference its operation is causing rather than expecting an existing, licensed, service to suffer interference, even de minimis interference. De minimis interference is in the eye of the beholder: The interference-causer and the interference-receiver can have very different ideas of what constitutes de minimis interference. If the licensed user can detect the interference, it is not de minimis.

5. Finally, EIBASS submits that a de minimis interference criterion should not be an excuse for short cut or self-serving engineering in an experimental application. The present non-interference basis (NIB) policy for experimental operations is a good one, and should not be changed.

II. The Verizon Comments Target the Wrong Problem. The Real Problem Is Enforcement Indifference.

6. Verizon Wireless (Verizon) argues that the proposed Medical Program (MEDPRO) class of experimental licensees should not be allowed to use any commercial mobile radio services (CMRS) spectrum, due to the "high likelihood of harmful interference being caused to commercial operations."¹ Verizon argues that CMRS spectrum is "intensely utilized at

¹ Verizon comments, at page 3.

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universities and health care facilities,"² and thus would be unduly prone to interference from MEDRPO operations.

7. EIBASS notes that broadcast signals are also utilized at universities (especially non commercial educational FM (NCEFM) frequencies), but EIBASS does not suggest that this should make all broadcast frequencies automatically off limits. Nor did EIBASS argue that because of the importance of Broadcast Auxiliary Services (BAS) frequencies to broadcast station operation that MEDRPO, or other experimental operations, should be prohibited in those bands. Such a request would be too overreaching.

8. No, the problem is not the experimental use of spectrum allocated to licensed services, but the failure of Experimental Radio Services (ERS) licensees to adhere to the prior notification/prior coordination requirements routinely (and appropriately) placed on experimental authorizations as an operational condition. When there is no meaningful enforcement of such requirements, this atmosphere of enforcement indifference opens the door to abuse. This abuse sets the stage for an unwarranted interference risk. Enforcement indifference is what needs to be rectified, and EIBASS submits that this rulemaking is the place to do so.

9. Thus, the issue is not that MEDPRO (or other experimental operations) should not be allowed on CMRS spectrum, but rather than the required frequency coordination and stop-buzzer requirements be treated seriously by ERS licensees, and that the Commission send a clear message that failure to do so will result in interference to the experimental licensee's pocketbook: That is, a monetary forfeiture.

10. In its initial comments, EIBASS provided documentation about one experimental licensee, Ericsson, Inc./WC9XSK, that failed to comply with its prior coordination requirement, and caused harmful interference to the electronic news gathering (ENG) operations of Station WABC-TV in New York. Yet as far as EIBASS is aware, no enforcement actions were taken against Ericsson, let alone any monetary forfeiture assessed.

11. Now it has come to EIBASS' attention of another experimental licensee that has ignored its frequency coordination obligations: Northrop Grumman Systems Corporation ("Northrop Grumman")³, licensee of ERS Station WE2XRO. The WE2XRO license authorizes experimental operation from McClellan Field (formerly McClellan AFB), which is located in a

² Verizon comments, again at page 3.

³ Previously Northrop Grumman Space & Mission Systems Corporation.

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large metropolitan area (Sacramento, Nielsen Designated Market Area (DMA) Number 20). The WE2XRO experimental license is unusual, in that it authorized high-power (224 to 263 watts effective radiated power (ERP)) emissions that are *co-channel* to at least four Sacramento TV stations (KVIE, D09; KXTV, D10; KOVR, D25; and KTXL, D40); *co-channel* to stations the 450/455 MHz RPU band (KYY240; KYY241; and KZ2384, all 455.25 MHz); *co-channel* to stations in the 950 MHz Aural BAS band (WHB832, 950.5 MHz, used by KQJK(FM), 93.7 MHz, Roseville, CA; and WPJE918, 950.5 MHz, used by KSTE(AM), 650 kHz, Rancho Cordova, CA); *co-channel* to 2 GHz TV BAS Channels A1 (2,025–2,037.5 MHz), A3 (2,049.5–2,061.5 MHz) and A6 (2,085.5–2,097.5 MHz); and *co-channel* to 2.5 GHz TV BAS Channel A9 (2,467–2,483.5 MHz).

12. However, even this stunning combination of potentially interfering frequencies for a single experimental authorization is not what bothered EIBASS, since the authorization has, as Special Condition 2 (SC2), the "SBE Clause."⁴ The authorization further has a Special Condition 9 (SC9), "Operation is subject to prior coordination with affected Fixed Microwave Service licensees in accordance with 47 CFR, Part 101.103(d)." This is commonly referred to as a prior coordination notice (PCN) requirement.

13. Yet the SBE Executive Director reported to EIBASS that Northrop Grumman never contacted him as required, and the two radio stations with nearby co-channel Aural studio-transmitter links (STLs) likewise indicated to EIBASS that they never received a PCN. And those two STLs are simply the co-channel stations within 50 km of McClellan Field, whereas the TSB-10F coordination keyhole distance in its back arc is 200 km. Of course, Northrop Grumman should have served PCNs on more than two close-in, co-channel Aural STL licensees. As best EIBASS can ascertain, the total count of PCNs sent by Northrop Grumman was *zero*. Finally, research done by EIBASS found that neither the 2 GHz-and-Down BAS coordinator for the Sacramento market, nor the 2 GHz-and-Up BAS coordinator for the Sacramento market, were ever contacted by Northrop Grumman.

⁴ The exact wording is

Operation is subject to prior coordination with the Society of Broadcast Engineers, Inc. (SBE); ATTN: Executive Director, 9247 North Meridian Street, Suite 305, Indianapolis, IN 46260; telephone 866-632-4222; FAX, 317-846-9120; e-mail: executivedir@sbe.org; information: www.sbe.org.

Please note, however, that the current SBE address is now 9102 North Meridian Street, Suite 150, Indianapolis, IN 46260. All of the other SBE contact information is unchanged.

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14. EIBASS does not know whether the WE2XRO operation caused actual interference, although documenting such interference for a swept, frequency-hopping signal from 20 MHz to 2,479.5 MHz would be exceptionally difficult. The point, though, is not whether interference was caused, but whether Northrop Grumman ignored material conditions of its experimental authorization, apparently assuming that the risk of being issued a Notice of Apparent Liability (NAL) was nil. Commission policy must not be that ignoring Special Conditions on an experimental authorization is only a problem if (a) you cause harmful interference and (b) you get caught.

15. Another example of failure to coordinate is Microsoft Corporation, which was recently issued Experimental Special Temporary Authority (STA) Station WE9XUO, for March 28 through April 11, 2011, in Las Vegas; apparently for the National Association of Broadcasters (NAB) convention, although there is no location restriction to just the Las Vegas Convention Center (LVCC) on the STA. Because the STA authorized operation on TV Channels 21–36 and 38–51, it had the SBE Clause. Yet the SBE Executive Director reports that no one from Microsoft Corporation ever contacted him, as required. Had Microsoft done so, they would have been referred to the Las Vegas BAS frequency coordinator, who undoubtedly would have pointed out that TV Channels 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 34, 35, 36, 40, 41, 42, 43, 45, 47, 49, 50 and 51 are currently in use by local TV, Class A, and LPTV stations. Thus, it appears that not only did Microsoft not do its fundamental frequency coordination homework, by inappropriately asking for frequencies that would be co-channel to Las Vegas TV stations, but then compounded its negligence by ignoring WE9XUO Special Condition 2; that is, the SBE Clause.

16. This failure to comply with the WE9XUO Special Condition 2 almost resulted in a conflict with another experimental STA issued for the NAB show, WE9SXY. That STA is for use of TV Channel 46 at the LVCC, and similarly had the SBE clause. However, the WE9SXY holder, Larcan, Inc. (Larcan), met its Special Condition 3 requirement by contacting the SBE Executive Director. Further, because of EIBASS' raising concern about the inappropriate number of locally-in-use TV channels authorized by the Microsoft WE9XUO STA with the SBE frequency coordinators group, Larcan has now been successful in contacting Microsoft, and alerting Microsoft to Larcan's planned use of Channel 46 at the LVCC. But this close call could have been avoided had Microsoft simply complied with the WE9XUO Special Condition 2 requirement.

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17. Of course, not all licensees ignore the frequency coordination special conditions often placed of experimental licenses and STAs. A shining example is The Boeing Company ("Boeing") and its recently issued WF2XNQ experimental license. The license authorized frequencies fall in the 450/455 MHz RPU band, TV Channels 14–36 and 38–51, the 950 MHz Aural BAS band, the 7 GHz TV BAS band, and the 13 GHz TV BAS band, and thus had the SBE clause. EIBASS was able to confirm that before commencing operations Boeing contacted both the Seattle area Above 1 GHz and Below 1 GHz BAS frequency coordinators. Boeing additionally retained a commercial microwave frequency coordinator to send out PCNs, even though not explicitly required to do so by a special condition on the WF2XNQ authorization. Thus, EIBASS gives a "well done" to Boeing. Unfortunately, Boeing is notable for its compliance with the SBE clause. Until experimental licensees that *fail* to comply with the SBE clause become the notable exception, EIBASS submits that the Commission has work to do.

18. Thus, EIBASS submits that the Commission has created a serious enforcement indifference climate, and no expansion of the ERS rules is appropriate without correcting this. Stepped up enforcement of the Special Conditions typically placed on ERS authorizations is sorely needed. After all, broadcast station licensees pay substantial annual User Fees, the stated purpose of which is to pay the cost of rule enforcement.

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III. Summary

19. The de minimis interference criteria proposed by Marcus is inappropriate, as it would obligate licensees suffering interference to not only identify and locate the interferer, but then to show that the interference was in excess of de minimis. The Verizon proposal that all CMRS spectrum be off-limits to MEDPRO experimental operations is overly broad, and misses the true nature of the problem, which is the widespread failure of ERS licensees to take seriously the Special Conditions typically placed on an ERS authorization. Since the Commission has been remiss in its failure to enforce such Special Conditions, it has consequently created a prevailing attitude by many experimental licensees that they can ignore Special Conditions placed on their experimental authorization with no fear of consequences.

Respectfully submitted,

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